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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,410	07/18/2003	Gary R. Doyle	BUR920030024US1	1409
30449	7590	12/28/2005	EXAMINER	
SCHMEISER, OLSEN + WATTS			LEUNG, WAI LUN	
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SUITE 201			PAPER NUMBER	
LATHAM, NY 12110			2633	

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/604,410	Applicant(s) DOYLE ET AL.	
	Examiner Danny Wai Lun Leung	Art Unit 2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group II in the reply filed on 11/17/2005 is acknowledged. The traversal is on the ground(s) that "all claims 24-42 is sufficiently related that a thorough search for the subject matter of any one group of claims would encompass a search for the subject matter of the remaining claims". This is not found persuasive because:

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as being used in a process that only uses one transmitter and receiver system and that does not involve complex communications involving decoding and sending address. Invention II does not require a particular glass layers and metal layers oriented in a particular way as required by invention I. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above, and have acquired a separate status in the art, because of their recognized divergent subject matter, as shown by their different classification, and the search required for Group I (*glass layer, metal layers*) is not required for Group II (*decoding, sending address*), restriction for examination purposes as indicated is proper. Therefore, it does create serious burden on examiner. Furthermore, Rule 37 C.F. R. 1.142 (Requirement for Restriction) clearly states "**if two or more independent and distinct inventions** are claimed in a single application, the **examiner** in an Office action **will require the applicant** in the reply to that **action to elect an invention** to which the claims will be restricted, this official action being called a requirement for restriction" (emphasis added).

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In addition, applicant fails to distinctly and specifically point out why they are not patentably distinct other than indicated that it does not create serious burden for examiner. Rule 37 CFR 1.111(b) requires that applicant must “distinctly and specifically point out error” in the examiner’s action. Argument or conclusions of attorney can not take the place of evidence.

The requirement is still deemed proper and is therefore made FINAL.

Claim Objections

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claim 36 been renumbered 43.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 34-36 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent Number 6,674,971 to Boggess et al.

Regarding to claim 34, Boggess discloses an optical transmission method, comprising:

sending an address of a second core and control signals (*col 15, ln 31-35*) from a first core (*applicant defined core to be "a particular section of logic" in paragraph 46 of the specification; CPU 200 in fig 6A is a particular section of logic*) to a first optic controller (*210, fig 6A*), wherein an integrated circuit (*fig 6A*) comprises the first core (*CPU 200*), the first optic controller (*210, fig 6A*) connected to the first core (*col 15, ln 38-42*), a plurality of optical transmitters (*240, fig 6A*) under control of the first optic controller (*col 15, ln 49-57*), a second core (*CPU in Node 2, 360, fig 7A*), a second optic controller (*gate controller in Node 2, 360, fig 7A*) connected to the second core, a plurality of optical receivers (*receivers in Node 2, 360, fig 7A*) under control of the second optic controller (*col 15, ln 49-57*), and a plurality of optical channels (*channels 1-4, fig 7A*), wherein each optical channel extends from one of the optical transmitters to one of the optical receivers (*col 15, ln 49-52*);

decoding, by the first optic controller, the address (*col 15, ln 27-42; the CPU determined the addressing information by reading the header information, and encode the address information into channels being used as well as messages sent to controller, the controller decoding address information accordingly*);

after said decoding, selecting a first optical channel of the plurality of optical channels for subsequently transmitting an optical signal over the first optical channel, wherein the first optical channel extends from a first optical transmitter of the plurality of optical transmitters and a first optical receiver of the plurality of optical receivers, and wherein said selecting is performed by the first optic controller (*col 15, ln 43-57*);

after said selecting, transmitting data from the first optic controller to the first optical transmitter (*col 15, ln 52-54*);

encoding into optical data, by the first optical transmitter, the transmitted data (*col 15, ln 54-57*); and

transmitting the optical data from the first optical transmitter to the first optical receiver via the first optical channel (*col 15, ln 58-67*).

As to claim 35, Boggess further discloses wherein said selecting takes into account a channel length of each optical channel of the plurality of optical channels (*col 15, ln 49-67*).

As to claim 36, Boggess further discloses wherein said selecting takes into account one or more defective optical channel of the plurality of optical channels (*col 17, ln 66-col 18, ln 12*).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Number 6,674,971 to Boggess et al., in view of US patent Number 6,081,527 to Chappel et al.

Regarding to claim 43, Boggess discloses the method as discussed above regarding claim 34. Boggess does not disclose expressly wherein the method further comprises after said transmitting the optical data: handshaking between the first optical transmitter and first optical receiver to communicate between the first optical transmitter and first optical receiver such that said transmitting the optical data was successful. Chappel, from the same field of endeavor, teaches a method comprises after transmitting the optical data: handshaking between the first optical transmitter and first optical receiver to communicate between the first optical transmitter

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and first optical receiver such that said transmitting the optical data was successful (*col 5, ln 48-67*), wherein the handshaking comprises exchanging messages between the optical transmitter and first optical receiver over an optical channel of the plurality of optical channels (*col 6, ln 1-11*). Therefore, it would have been obvious for a person of ordinary skill in the art at the time of invention to modify Boggess's invention such that a second optical channel of the plurality of optical channel can be used for handshaking between the first optical transmitter and first optical receiver to communicate between the first optical transmitter and first optical receiver such that said transmitting the optical data was successful after transmitting the optical data, as taught by Chappel, wherein the handshaking comprises exchanging messages between the optical transmitter and first optical receiver over the second optical channel of the plurality of optical channels. The motivation for doing so would have been to ensure that no data are lost by performing handshaking between the optical transmitter and the first optical receiver.

7. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Number 6,674,971 to Boggess et al., in view of US Patent Number 4,797,879 to Habbab et al.

Regarding to claim 37, Boggess discloses the method as discussed above regarding claim 34. Boggess further discloses wherein the method further comprises: Detecting a collision with the optical data during said transmitting the optical data (*col 17, ln 66-col 18, ln 3*); Boggess does not disclose expressly that responsive to said detecting, re-transmitting the optical data from the first optical transmitter to the first optical receiver via a second optical channel of the plurality of optical channels. Habbab, from the same field of endeavor, teaches a method of detecting a collision with optical data during transmitting the optical data, and responsive to said

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detecting, re-transmitting the optical data from the first optical transmitter to the first optical receiver via a second optical channel of the plurality of optical channels (*col 4, ln 7-34*).

Therefore, it would have been obvious for a person of ordinary skill in the art at the time of invention to re-transmitting the optical data from the first optical transmitter to the first optical receiver via a second optical channel of the plurality of optical channels, as taught by Habbab, responsive to Boggess's detecting of a collision in Boggess's method. The motivation for doing so would have been to resolve the collision problem in Boggess's method by re-transmitting the optical data from the first optical transmitter to the first optical receiver via a second optical channel of the plurality of optical channels such that the transmission system is faster and more efficient.

8. Claims 38-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Number 6,674,971 to Boggess et al., in view of US Patent Number 5,946,116 to Wu et al.

Regarding to claim 38, Boggess discloses the method as discussed above regarding claim 34. Boggess does not disclose expressly wherein the first optical channel comprises a first optic channel oriented in a first direction, a second optic channel segment oriented in a second direction that is perpendicular to the first direction, and a redirection termination disposed between the first and second optic channels for causing the optical data propagating in the first optic channel in the first direction to be diverted into the second optic channel to propagate in the second optic channel in the second direction. Wu, from the same field of endeavor, teaches an optical transmission method wherein a first optical channel (*input 500, fig 10*) comprises a first optic channel oriented in a first direction (*polarization Rotator array 700, fig 10, oriented*

vertically), a second optic channel segment oriented in a second direction that is perpendicular to the first direction (*704, fig 10, oriented horizontally*), and a redirection termination disposed between the first and second optic channels (*PBS 800, fig 10*) for causing the optical data propagating in the first optic channel in the first direction to be diverted into the second optic channel to propagate in the second optic channel in the second direction (*as described in col 8, ln 56 – col 9, ln 26; this is similar to applicant's fig 10 and fig 2A as disclosed in the specification*). Therefore, it would have been obvious for a person of ordinary skill in the art at the time of invention to apply Wu's teaching wherein the first optical channel comprises a first optic channel oriented in a first direction, a second optic channel segment oriented in a second direction that is perpendicular to the first direction, and a redirection termination disposed between the first and second optic channels for causing the optical data propagating in the first optic channel in the first direction to be diverted into the second optic channel to propagate in the second optic channel in the second direction, to route Boggess's optical signal from one channel to another. The motivation for doing so would have been to route optical signal from one channel to another while having low inter-channel crosstalk and low insertion loss (*Wu, col 10, ln 41-47*) by having a first optical channel comprises a first optic channel oriented in a first direction, a second optic channel segment oriented in a second direction that is perpendicular to the first direction, and a redirection termination disposed between the first and second optic channels for causing the optical data propagating in the first optic channel in the first direction to be diverted into the second optic channel to propagate in the second optic channel in the second direction..

As to claim 39, Wu further discloses wherein the redirection termination is slant-shaped (*as shown in fig 10*);

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As to claims 40-42, absent any teaching of criticality, it would have been an engineering design choice to make the redirection termination as described above as slant-shaped, curved, hemispherical-shaped, or cone-shaped. Furthermore, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Swain et al., 33 CCPA (Patents) 1250, 156 F.2d 239, 70 USPQ 412; Minnesota Mining and Mfg. Co. v. Coe, 69 App. D.C. 217, 99 F.2d 986, 38 USPQ 213; Allen et al. v. Coe, 77 App. D.C. 324, 135 F.2d 11, 57 USPQ 136.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Danny Wai Lun Leung whose telephone number is (571) 272-5504. The examiner can normally be reached on 9am-6:30pm Mon-Thurs, except federal holidays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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DWL

December 20, 2005



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